

In re Appln. of Saunders et al.  
Corres. to Int'l Application No. PCT/GB00/03368

the switch means being operable to selectively interconnect pairs of filaments a second end of those filaments being remote from the first end.

5. (Amended) An antenna according to claim 1, including switchable filaments having switch means for selectively altering the electrical length and/or interconnections of the switchable filaments and

each of the switchable filaments including at least a first filament section and a second filament section; and

the switch means being operable to selectively connect or isolate the first and second filament sections of each switchable filament so as to vary the electrical length of that filament.

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6. (Amended) An antenna according to claim 1, in which:

the detecting means is operable to detect a signal to noise ratio of a received signal; and

the control means is operable to control the operation of the matching circuit and/or the weighting circuit so as to improve the signal to noise ratio of the received signal.

7. (Amended) An antenna according to claim 1, in which:

the detecting means is operable to detect a signal to (noise plus interference) ratio of a received signal; and

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the control means is operable to control the operation of the matching circuit and/or the weighting circuit so as to improve the signal to (noise plus interference) ratio of the received signal.

8. (Amended) An antenna according to claim 1, in which:

the detecting means is operable to detect a signal level of a received signal;

and

the control means is operable to control the operation of the matching circuit and/or the weighting circuit so as to improve the signal level of the received signal.

9. (Amended) An antenna according to claim 1, in which:

the detecting means is operable to detect a VSWR for a transmitted signal;

and

the control means is operable to control the operation of the matching circuit and/or the weighting circuit so as to improve the VSWR for transmission of that signal.

10. (Amended) An antenna according to claim 1, in which the detecting means comprises:

analogue to digital conversion means for converting respective signals received by the filaments and/or filament group into corresponding digital representations;

a memory for storing the digital representations;

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means for combining the digital representations using respective phase relationships and gains; and

means for detecting properties of the antenna by analysis of the combined digital representations.

91 11. (Amended) An antenna according to claim 1, in which the detecting means comprises:

means for combining respective signals received by the filaments and/or filament group using respective phase relationships;

analogue to digital conversion means for converting the combined signals into a corresponding digital representation;

a memory for storing the digital representation; and

means for detecting properties of the antenna by analysis of the combined digital representations.

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13. (Amended) An antenna according to claim 1, in which the detecting means operates at least during reception of a reference signal burst by the antenna.

a2 14. (Amended) An antenna according to claim 1, in which n is an even integer.

15. (Amended) An antenna according to claim 1, in which n is equal to 4 or 6.

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16. (Amended) An antenna according to claim 1, wherein  $n$  is 4 and including two filament groups each of two diametrically opposed filaments, the filaments in each respective group being coupled together with a phase weighting of substantially  $180^\circ$ .

17. (Amended) An antenna according to claim 1 wherein the filaments in the or each filament group have a diversity correlation of 0.7 or better.

18. (Amended) An antenna according to claim 1, in which the filaments are helically shaped.

19. (Amended) An antenna according to claim 1, in which the filaments are at least partially intertwined.

20. (Amended) An antenna according to claim 1, having a volute of generally elliptical or rectangular axial cross-section.

21. (Amended) An antenna according to claim 1, wherein the weighting circuit operates at baseband.

22. (Amended) An antenna according to claim 1, wherein the weighting circuit operates at RF.

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93 24. (Amended) An antenna according to claim 1, including a matching circuit for matching the characteristic impedance of the antenna to that of a transmitting and/or receiving apparatus.

Please cancel claim 26: